

Willow Wattle Installation



Crosslake Community School Native Plant

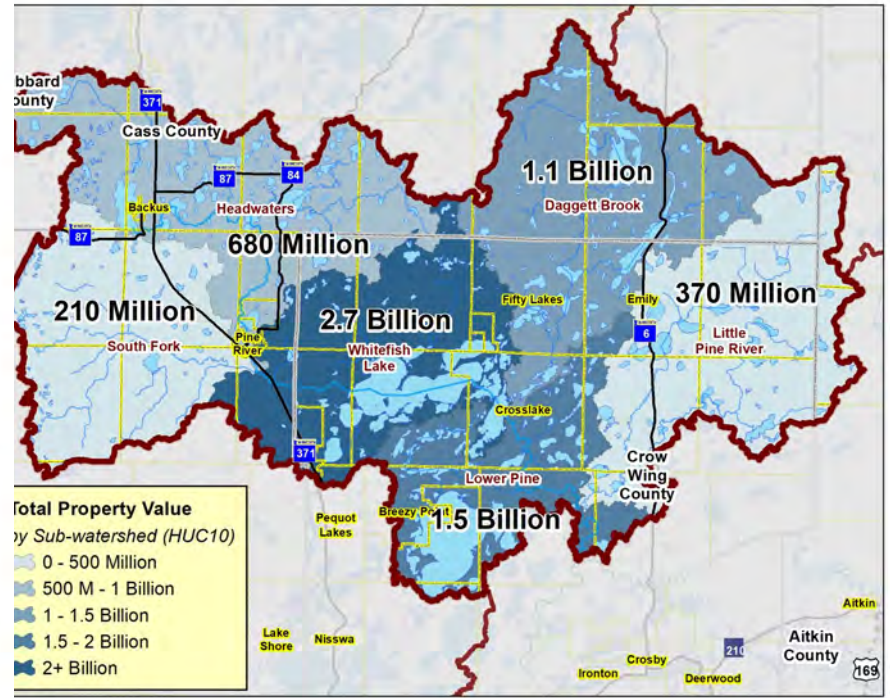
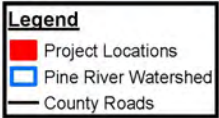


Shoreline Restoration Open House





# Kristie Roedl's Project Locations







# WAPOA shows how to Reclaim Lost Shoreline

Updated: Aug 2, 2021

It's a beautiful site on the south shore of Big Trout lake. A small cabin sits on top of a hill that's shaded by mature trees. The gardens are filled with native ferns. A series of flagstone pavers lead to primitive steps down to the lake. The shoreline is left natural and not mowed. A small clearing offers a great view from a bench. The dock extends into a naturally sandy shore and the kayak is ready to paddle.

Merry Keefe has been at the property since 1944. She has modernized the cabin but left the land in pristine condition. In recent years, the shoreline has been slowly receding due to larger wind and rain events and increased wave action. Even though the shoreline has lots of trees and plants, erosion has claimed upwards of five feet in some areas.

At this point, most homeowners would call a landscaping company to install riprap, a row of rocks that tries to keep the shoreline in place. Riprap on a lake reduces critical habitat for fish and wildlife resources and the food chain they depend on. The installation can be expensive and the shoreline still can be damaged by ice heaves and undermined by wave action.

Merry contacted WAPOA and worked with Shelley Larson from Hayland Woods, to come up with a different plan.

On June 7, WAPOA organized a Community Build project to build willow wattles and add native plants at the water's edge. Using volunteer time reduced costs, brought neighbors together, and created an instant workshop for property owners to learn about options for protecting their own shore.

Shelley started with a quick talk about the project and shoreline erosion:

- Willow wattles will be placed in the water along the length of the shore. They will block the wave action and allow for the water to filter back through the willow to slowly trap the organic matter.
- A willow wattle can be better than a purchased biolog which are often moved by storms, do not allow water to pass through the structure, and takes a long time for plant roots to permeate and anchor to the lake bottom.
- A permit is not needed to install the willow wattle, but the DNR does require a permit to install plants below water's edge.
- The undeveloped shoreline is full of trees plants with deep roots to hold the banks. Dogweed and Spirea (Meadowsweet) were planted along the shore to build a root system.
- Deep rooted plants and sedges are added every foot along the shore and planted into the existing bank and vegetation. The flowers will bloom during the entire summer.

- If you already have rip rap on your shore, it does help to leave native plants growing in the rock. Their deep roots, protect the lake from runoff, provide habitat, and help protect a lakeshore against wave action.
- Reed Canary grass is invasive and tends to take over a shoreline. Unfortunately, the shallow root system creates a mat, blocks deep rooted native plants, and doesn't prevent any erosion. Learn more about how to identify and remove [Reed Canary Grass from the Minnesota DNR](#).

Then she taught the group of 20 volunteers how to build and plant the willow wattles. Here are the steps:

1. Collect 8 to 10 foot branches from willow. Doesn't have to be willow – dogwood, sumac or other long, straight, and flexible braches will work.
2. Lay out bundles along the shore.



3. Tie tightly with twine every 2 feet.





4. Move the whole row into the water

5. Place a 3 foot stake through the wattle and drive into the ground with a sledge.





6. Plant into the bank and behind the wattle. Do not put plants in the wattle, they will just wash away.





For places with more erosion, use multiple rows of willow as an additional barrier.







After a year, this shoreline will become a beautiful lakeside garden that naturally reduces erosion with minimal maintenance. Here's a photo of a different site that used the same techniques.





Thank you, Merry Keefe, for showing how to love your lake with a landscape that is beautiful and helps improve water quality. Thank you to the volunteers for donating your time. Thank you to area businesses for the donations of food and drinks: Lake Country Crafts and Cones, Crosslake Subway, Old Milwaukee Club, and Crosslake DQ.

The Pine River Watershed Alliance recognizes the great work WAPOA continues to do to restore shoreline and native habitat. [WAPOA.org](https://wapoa.org) has a [shoreline restoration page](#) with a [video of Shelly's recent talk](#) on what causes erosion, options to repair it, and suggestions on preventing future damage. WAPOA offers members assistance with shoreline projects and site assessments.

If you'd like to build your own willow wattles, Clearwater Lake Conservancy has a how-to-guide: <https://www.clearwaterlakemn.org/willow-wattle---diy.html>



Jodi Eberhardt  Jul 8, 2021 3 min read

# Camp Knutson on a Mission to Save Shoreline

Camp Knutson's beautiful 30-acre campus is nestled between the pristine waters of Lower Whitefish and Big Trout lakes. The very tip of the point where the channel connects the two lakes has a significant amount of erosion due to storms, ice, boat traffic, and wave action. When former campers return, it's the walk through the towering trees and the view of the big lake they remember from childhood. It's a space the camp strives to preserve for future generations.







Jared Griffin, Camp Director, explained the mission behind the project, "Our campus has over mile worth of precious shoreline that our campers with disabilities and medical conditions are proud to call their home away from home. We always teach our campers to leave camp and our natural environment better than you found it. Camp K community leaders have decided to lead by example and take on one of our biggest challenges by tripling our efforts to preserve our shoreline."

The site's sun-baked, sugar sand soil makes growing anything very difficult. The sand cliff is really steep and even just a little bit of foot traffic or large rain event can cause the sand to collapse. Camp Knutson has relied on the expertise of Prairie Restorations to choose native plants that can put roots down 10 to 12 feet. They planted native shrubs, grasses, sedges with a mix of drought-tolerant flowers: Rough Blazing Star, Penstemon, Spiderwort, Hairy Goldenrod, Butterfly Milkweed and Wild Bergamot.







The camp has spent over \$15,000 trying to keep their shoreline from washing away. Jared Griffin, Camp Director, described the project, "The past 3 years we have invested a lot of time, talent, and financial resources trying to establish more plant growth with deeper root systems by planting native plugs and seeding. We have also installed some coconut logs, willow waddles, and other efforts. We are starting to make small progress towards restoring this hard-hit area of our shoreline, but more still needs to be done on an annual basis to address this significant challenge."

Native plants are slow to take hold. A common phrase is "The first year they sleep, the second year they creep, and the third year they leap." The camp is finally starting to see success from some early plantings.







Camp Knutson was one of the 2021 Land and Waters grant recipients. The \$2550 grant award allowed the camp to add more plants to the site.



The camp seeks out grants and the support of the community to continue efforts on this project and to support the mission of the camp. To learn how you can help, visit [Camp Knutson Volunteers website](#). They are coordinating two upcoming fundraisers:

1. A Night Under the Stars will be held on Saturday, July 17. The camp website (<https://www.lssmn.org/campknutson/>) has details for the virtual benefit and auction.
2. On August 14, 2021, a rainbow of quilts will be up for sale at the Camp Knutson quilt auction. Quilters from far and wide donate their time and talent to share hundreds of quilts that are in search of new homes. Through an on-line auction, anyone can bid on the beautiful quilts and the funds raised will positively impact the lives of many campers.

The Pine River Watershed Alliance recognizes the outstanding work at [WAPOA](#) and Camp Knutson to protect water quality and restore shoreline. Thank you, Camp K, for showing a great example of natural shoreline to the campers and to your neighbors on the lake. Thank you to the countless staff and volunteers that work on the project and to the community for supporting the camp financially.

Camp Knutson is a supportive camp for individuals with disabilities, medical conditions and other identified needs. Lutheran Social Service of Minnesota partners with other organizations to host camps for youth and adults with identified needs such as autism, heart disease, skin conditions, Down syndrome, burn survivors, HIV/AIDS and youth experiencing homelessness.

The Pine River Watershed Alliance ([www.PRWA.us](http://www.PRWA.us)) is a citizen-led volunteer organization that works with local units of government and other agencies to preserve and protect the local environment while meeting resident needs for economic development and a healthy community. PRWA sponsors a website to provide tips on how to protect water quality and shoreline at [www.loveyourlake.info](http://www.loveyourlake.info).